

**TENNESSEE CAREER AND TECHNICAL EDUCATION TEXTBOOK SCREENING INSTRUMENT**  
**Sections I & III Reviews**

Book:	Agricultural Mechanics: Fundamentals & Applications	Publisher:	Cengage Learning Inc.
ISBN:	9781305468474	Year:	2015
Levels/Course:	Basal	Category:	5944

**BEFORE YOU BEGIN**

**ALIGNMENT TO THE TENNESSEE CAREER AND TECHNICAL EDUCATION STANDARDS:**

Tennessee's Career and Technical Education Standards (hereafter, "the standards") represent a significant shift in the definition of student proficiency within career and technical education environments. Evaluators of materials should understand that the standards replace the proficiency frameworks of years past in three major respects:

- 1) A shift to clear, specific, and measurable expectations for student learning. The standards articulate deep knowledge and skill attainment, departing from the competency-based structure of years past.
- 2) Increased focus on rigor in literacy and mathematics within technical contexts. The new standards align to all Tennessee State Standards for English Language Arts and Literacy in Technical Subjects and, where appropriate, select Tennessee State Standards in Mathematics.
- 3) Sequential progression of knowledge and skills within and across courses. The new standards build on each other both within course content and across course levels, arranged within programs of study that culminate in capstone and/or work-based learning experiences for students.

Evaluators of materials must be well versed in the standards for the course(s) aligned to the materials in question, how the content fits into the progressions in the content standards, and the expectations of the standards with respect to conceptual understanding, fluency, and technical application. Aligned courses in the Architecture & Construction Career Cluster:

**ORGANIZATION OF THIS DOCUMENT**

**SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY**

Section II includes additional criteria for alignment to the standards as well as indicators of quality.

**SECTION III: FOCUS AREA (*optional*)**

Section III allows reviewers to capture qualitative observations on an additional area of focus, if presented in the materials.

*\*For the purposes of this document, Tennessee CTE students are considered to be enrolled in course "levels" (i.e., Level 1, Level 2, Level 3, and Level 4) due to variation in the grade level at which students may take a course. For example, a tenth-grade student may be enrolled in a Level 1 course. For this reason, reviewers are asked to evaluate materials on the basis of their alignment to particular course levels, not grade levels or grade bands.*

*\*\*This percentage is a guide. Reviewers should not attempt to compute percentages based on counting pages or counting lessons. Reviewers will use their professional judgment to determine how students are meant to spend their time to determine focus and provide evidence for their decision.*

Section II(1). ADDITIONAL ALIGNMENT CRITERIA	SCORE	JUSTIFICATION/NOTES
A. Materials are aligned to relevant <b>national and/or industry standards</b> where appropriate. For example, <i>Mechatronics I</i> materials routinely make reference to and reinforce connections with national industry certification standards from companies like Siemens.	2	Materials are aligned with industry standards, but few references to industry certifications.
B. Materials are aligned to discipline-specific <b>content or pedagogical frameworks</b> frequently used by professionals in associated industries. For example, Differentiating Instruction materials routinely make reference to and reinforce connections with instructional strategies that meet the educational needs of the student, as specified in the standards.	2	Textbook provides an solid reference for use in agricultural mechanics shop, including 'Student Activities' for each chapter.
C. Connections are made to discipline-specific <b>professional societies and organizations</b> , and their value is clearly communicated in the materials. For example, <i>School Counseling</i> materials routinely make reference to and reinforce connections with the American School Counselor Association (ASCA).	1	Text provides few references to professional organizations.

**Additional Comment Section II(1):**

Section II(2). SEQUENCE AND PROGRESSION OF STANDARDS	SCORE	JUSTIFICATION/NOTES
A. Connections are made within a course between knowledge and skills, where these connections are appropriate and natural, as set forth by the standards.	2	Textbook begins with careers and safety then moves into different shop skills areas, such as; welding, electricity, plumbing, etc.
B. Materials are vertically coherent with previous courses and these connections are made clear in the materials. The connections are explicit to the other materials in the course.	2	Textbook begins with careers and safety then moves into different shop skills areas, such as; welding, electricity, plumbing, etc. This textbook

		reviews and adds on to knowledge obtained in previous courses (Agriscience).
C. For materials in a series, content progressions reflect the progressions as seen in the standards. These progression connections are clearly indicated in the materials. Any discrepancies in content progressions enhance the required learning in each course and are clearly aimed at helping students meet the standards as written.	2	This textbook reviews and adds on to knowledge obtained in previous courses (Agriscience).

Section II(3). TEACHER SUPPORTS	SCORE	JUSTIFICATION/NOTES
A. Materials support teachers in ways such as the following: planning (including ideas for pacing), sample lessons, laboratory applications, projects, vocabulary, and instructional strategies.	2	Each chapter begins with: Competencies to be Developed Materials List Terms to Know Each chapter ends with: Student Activities Relevant Web Sites Self-Evaluation
B. Materials include teacher-directed materials that explain the role of the practice activities in the classroom and in students' content development. Problems and activities present opportunities for students to make use of and exhibit the skills as they work on mastery of content.	1	Teacher materials not bid (not reviewed), but each chapter has Student Activities with activities aligned to materials in that chapter. The Appendix also offers projects along with plans and materials needed.

<p>C. Opportunities and resources are provided for teachers to conduct independent study to enhance their own understanding and knowledge of course topics. Materials provide avenues to seek and identify quality professional development in a manner that will support student learning.</p>	<p>0</p>	<p>Teacher materials not bid.</p>
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<b>Section II(4). USABILITY</b>	<b>SCORE</b>	<b>JUSTIFICATION/NOTES</b>
A. Materials can be accessed in a variety of formats and media, including but not limited to printed textbooks, digital storage devices, online applications, and cloud-based forums.	1	Print or online.
B. Materials are clear and easy to read for students, teachers, and parents. The design and graphics do not distract from the course content and are appropriately placed.	2	Excellent graphics, charts, data charts and appendices.
C. Materials include supports for all learners, e.g., ELs, students who are below grade level, advanced students.	1	English/Spanish glossary.
D. Materials are culturally and politically sensitive to the full range of potential users, and do not advance unwarranted opinions that are not factually based. All materials strive to present content, not beliefs.	2	

**Please note any concerns with sensitivity below:**

<b>Section II(5). ASSESSMENTS</b>	<b>SCORE</b>	<b>JUSTIFICATION/NOTES</b>
A. Materials include aligned assessments at regular intervals throughout the text(s), or as supplements to the primary instructional materials. Aligned assessments may include end-of-chapter quizzes, unit test modules, and practice exams.	1	Teacher materials not bid (not reviewed). Each chapter ends with: Student Activities Relevant Web Sites Self-Evaluation
B. Materials offer ideas and guidance on measuring student progress throughout the duration of the aligned course(s). Formative, interim, and summative assessment strategies are all presented to inform instructional strategy and improvement.	0	Teacher materials not bid (not reviewed).

C. Materials include assessment accommodations for diverse learners, including sample items that capture multiple measures of student proficiency.	0	Teacher materials not bid (not reviewed).
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**Please use the space below to leave any additional notes about Section II not previously captured:**

### **SECTION III (optional): FOCUS AREA**

Use this section to capture qualitative observations on an additional area of focus, if presented in the materials. A sample focus area for the Health Informatics program of study is provided in the following. If applicable, fill in the blank table with observations and notes.

<b>III. EXAMPLE: FOCUS IN Health Information Systems</b>	<b>NOTES</b>
A. Materials include coverage of major parameters most frequently reported in health databases.	<i>[Insert reviewer evaluation here.]</i>
B. Materials draw clear connections between policy and procedures and the legal ramifications of health informatics.	<i>[Insert reviewer evaluation here.]</i>
<b>III. FOCUS AREA:</b>	<b>NOTES</b>
A. Materials include coverage of project planning and management. B. Materials draw clear connection between personal and occupational safety. C. Material include coverage of irrigation and drainage and use of GIS and GPS.	A. 40 projects included in Appendix A B. Text covers personal and workforce safety, such as; Shop safety, policies and procedures, PPE, ANSI, OSHA, DOT, NSC

